Conduction w/ 2 layers

• Find H=Q/t in J/s

- →Key Point: Continuity (just like fluid flow)
 » H₁ = H₂
 - » $\kappa_1 A(T_0 T_C) / \Delta x_1 = \kappa_2 A(T_H T_0) / \Delta x_2$
 - » solve for $T_0 =$ temp. at junction
 - » then solve for H₁ or H₂
 answers: T₀=2.27 C H=318 Watts

Outside: $T_c = 0C$

 $\Delta x_1 = 0.02 \text{ m}$ $A_1 = 35 \text{ m}^2 \kappa_1 = 0.080 \text{ J/s-m-C}$ $\Delta x_2 = 0.075 \text{ m}$ $A_2 = 35 \text{ m}^2 \kappa_2 = 0.030 \text{ J/s-m-C}$

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Inside: $T_{H} = 25C$